

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application;

--1. (Currently Amended) A data storing medium, comprising:

a digital data area in which one of encrypted digital data and non encrypted digital data is written;

a control data area in which control data necessary for reproducing recorded digital data is written; and

a plurality of copyright control information ~~area~~ areas spaced apart by a predetermined interval in which is written the same copyright control information necessary for decrypting the encrypted digital data ~~is written~~,

wherein said plurality of copyright control information ~~area is~~ areas are embossed so as to be write prohibited, and

wherein said control data area is write permitted.

--2. (Previously Presented) The data storing medium as set forth in claim 1,

wherein an entire sector containing the control data area for the control data is write permitted.

--3. (Previously Presented) The data storing medium as set forth in claim 1,

wherein an entire sector containing the copyright control information area for the copyright control is write prohibited.

--4. (Currently Amended) The data storing medium as set forth in claim 1,

wherein the storing medium is a recordable medium, ~~and wherein said copyright control information area is an embossed area as a write prohibited area.~~

--5. (Cancelled)

--6. (Original) The data storing medium as set forth in claim 1,

wherein data that is different from the copyright control information and that is not detected as an error with error correction code is recorded.

--7. (Cancelled)

--8. (Currently Amended) The data storing medium as set forth in claim 7,

wherein the digital data area is divided into sectors and the predetermined distance is equivalent to ~~[[the]]~~ a length of a plurality of the sectors.

--9. (Currently Amended) The data storing medium as set forth in claim 1, wherein the ~~recorded~~ data written in the digital data area has been modulated corresponding to 8-16 modulating method.

--10. (Currently Amended) A data recording apparatus for writing ~~one of~~ encrypted digital data and ~~non-encrypted digital data~~ to a data storing medium, comprising:

means for writing the encrypted digital data and copyright control information for decrypting the encrypted digital data to the data storing medium so that when the encrypted digital data is reproduced the copyright control information is not obtained[[.]] by recording dummy information in a sector of the data storing medium, so as to form a write-prohibited area containing the copyright control information; and

means for encoding the copyright control information with an error correcting code.

--11. (Cancelled)

--12. (Previously Presented) The data recording apparatus as set forth in claim 10,

wherein, data written to the area for the copyright

control information is converted so that the data is not corrected by an error correcting process performed when the encrypted digital data is reproduced.

--13. (Original) The data recording apparatus as set forth in claim 12,

wherein the error correcting process is an error detecting and correcting process.

--14. (Original) The data recording apparatus as set forth in claim 12,

wherein the error correcting process is an error erasing and correcting process.

--15. (Currently Amended) The data recording apparatus as set forth in claim 12,

wherein ~~[[the]]~~ a data converting process converting the copyright control information is a process for exclusively ORing the copyright control information and different data, encoding the resultant data with error detection and/or correction code, and removing the different data.

--16. (Currently Amended) The data recording apparatus as set forth in claim 12,

wherein ~~[[the]]~~ a data converting process converting the copyright control information is a process that satisfies ~~[[the]]~~ a relation of $2a + b \geq d$ where "a" is ~~[[the]]~~ a number of lines that are not erased as an error of the copyright control information, "b" is ~~[[the]]~~ a number of lines that are erased thereof, and "d" is ~~[[the]]~~ a minimum distance of the error correction code.

--17. (Currently Amended) The data recording apparatus as set forth in claim 10,

wherein the ~~recorded~~ encrypted digital data has been modulated corresponding to an 8-16 modulating method.

--18. (Currently Amended) A data recording method for writing ~~one of~~ encrypted digital data ~~and non-encrypted digital data~~ to a predetermined data storing medium, comprising the steps of:

writing the encrypted digital data and copyright control information necessary for decrypting the encrypted digital data to the data storing medium in such a manner that when the encrypted digital data is reproduced the copyright control information is not obtained~~[[.]]~~; and

encoding the copyright control information with an error correction code prior to the step of writing.

--19. - 21. (Cancelled)

--22. (Previously Presented) A data reproducing method for reproducing data from a data storing medium on which an error correction block containing copyright control information necessary for decrypting encrypted digital data has been written,

comprising the steps of determining that an entire error correction block is not error corrected, and reproducing data of the error correction block that does not contain the copyright control information and that does not have an error.

--23. (Currently Amended) A data storing medium, comprising:

a first area in which digital data is written; and

a second area in which is written control data necessary for reproducing the digital data from said first area, said second area ~~having a~~ including a plurality of portions spaced apart by predetermined intervals and containing the same copyright control data and being embossed so as to form write prohibited ~~portion~~ portions.

--24. (Cancelled)

--25. (Currently Amended) The data storing medium as set forth in claim 23,

wherein said second area is composed of a plurality of sectors, and

wherein ~~at least a sector for~~ one of said plurality of sectors contains the copyright control information of said ~~second area is the~~ write-prohibited ~~portion~~ portions.

--26. (Cancelled)

--27. (Currently Amended) The data storing medium as set forth in claim 23,

wherein ~~[[a]]~~ the plurality of write-prohibited portions are formed at predetermined intervals in said second area so that reproduced data is synchronized.

--28. (Currently Amended) The data storing medium as set forth in claim 23,

wherein the data storing medium is a recordable optical storing medium, and

wherein the write-prohibited ~~portion is~~ portions are pre-formed by embossing in said second area.

--29. (Cancelled)

--30. (Original) The data storing medium as set forth in claim 23,

wherein said second area is formed on the medium so that said second area is read earlier than said first area.

--31. (Original) The data storing medium as set forth in claim 23,

wherein digital data that is written in said first area has been encrypted.

--32. (Currently Amended) A data reproducing method for a data storing medium having a first area in which digital data is written and a second area in which control data including copyright control data necessary for reproducing the data from the first area is written, the second area having a write prohibited portion, the data reproducing method comprising the steps of:

reading the copyright control data from two spaced-apart locations in the second area;

determining that the copyright control data has been correctly read; and

reproducing the digital data from the storing medium

corresponding to the copyright control data that has been correctly read.

--33. (Currently Amended) The data reproducing method as set forth in claim 32, further comprising the steps of:

detecting an error from the copyright control data that has been read; and

reproducing the digital data using control data of which an error flag corresponding to ~~[[the]]~~ an error ~~detected~~ result from said step of detecting an error has not ~~[[be]]~~ been set.

--34. (Cancelled)

--35. (Currently Amended) ~~[[The]]~~ A data writing method ~~as set forth in claim 34,~~ for a data storing medium having a first area in which digital data is written and a second area in which control data necessary for reproducing the data from the first area is written, the data writing method comprising the step of:

writing the control data to the second area in such a manner that part of the control data is not reproduced,

wherein the control data written in the second area contains copyright control data about the digital data written

in the first area, and

causing the copyright control data ~~being~~ to be written in the second area in such a manner that the copyright control data is reproduction-prohibited.

--36. (Currently Amended) The data writing method as set forth in claim 35,

wherein the copyright control data includes an error correction code and is converted in such a manner that $[[the]]$ a relation of $2a + b \geq d$ is satisfied where "a" is $[[the]]$ a number of lines that are not erased as an error of the copyright control ~~information~~ data, "b" is $[[the]]$ a number of lines that are erased thereof, and "d" is $[[the]]$ a minimum distance of the error correction code.

--37. (Original) The data writing method as set forth in claim 35,

wherein the copyright control information is reproduction-prohibited by exclusively ORing the copyright control information and different data, encoding the resultant data with error detection and/or correction code, and removing the different data.

--38. (Currently Amended) A data writing method for a data storing medium having a first area in which digital data

is written and a second area in which different data is written that is to be read before the digital data is read when the digital data is reproduced, the data writing method comprising the ~~step~~ steps of:

converting the different data in such a manner that the different data is not corrected by an error correcting process; and

writing the different data to the second area in such a manner that part of the different data is not reproduced.

--39. (Original) The data writing method as set forth in claim 38,

wherein the different data is written to the second area in such a manner that the different data is reproduction-prohibited.

--40. (Cancelled)

--41. (Currently Amended) The data writing method as set forth in claim ~~[[40]]~~ 38,

wherein the different data is converted in such a manner that ~~[[the]]~~ a relation of $2a + b \geq d$ is satisfied where "a" is ~~[[the]]~~ a number of lines that are not erased as an error of the ~~copyright control information~~ different data, "b" is

[[the]] a number of lines that are erased thereof, and "d" is [[the]] a minimum distance of [[the]] a error correction code used in the error correcting process.

--42. (Currently Amended) The data writing method as set forth in claim [[40]] 38,

wherein the different data comprises copyright control information and is converted by exclusively ORing the copyright control information and ~~different~~ false data, encoding [[the]] resultant data with an error detection and/or correction code, and removing the ~~different~~ false data.

--43. (Original) The data writing method as set forth in claim 38,

wherein the digital data written to the first area is encrypted data.

--44. (Original) The data writing method as set forth in claim 38,

wherein the different data that is written to the second area is data containing copyright control data about the digital data that is written to the first area.

--45. (Currently Amended) A data writing apparatus having

a data storing medium having a first area in which digital data is written and a second area in which control data necessary for reproducing the data from the first area is written, the data writing apparatus comprising:

a writing portion for writing data to the data storing medium; and

a data processing portion for supplying data to said writing portion in such a manner that ~~at least~~ a part of the control data comprising copyright control data is reproduction-prohibited[[]],

wherein said data processing portion converts the copyright control data of the control data in such a manner that the copyright control data is not corrected by an error correcting process.

--46. (Cancelled)

--47. (Currently Amended) The data writing apparatus as set forth in claim 45,

wherein said data processing portion converts the copyright control data in such a manner that [[the]] a relation of $2a + b \geq d$ is satisfied, where "a" is [[the]] a number of lines that are not erased as an error of the copyright control ~~information~~ data, "b" is [[the]] a number of lines that are erased thereof, and "d" is [[the]] a minimum

distance of [[the]] an error correction code used in the error correcting process.

--48. (Currently Amended) The data writing apparatus as set forth in claim [[46]] 45,

wherein said data processing portion exclusively OR's the copyright control information and different data, encodes the resultant data with error detection and/or correction code, and removes the different data.

--49. (Currently Amended) A data writing apparatus for a data storing medium having a first area in which digital data is written and a second area in which different data that is read before the digital data is read from the first area when the digital data is reproduced from the first area, the data writing apparatus comprising:

a writing portion for writing data to the data storing medium; and

a data processing portion for supplying data to said writing portion in such a manner that at least part of the different data comprising copyright control data is reproduction-prohibited[[.]],

wherein said data processing portion converts the different data in such a manner that the different data is not

corrected by an error correcting process, and

wherein said data processing portion converts the copyright control data in such a manner that a relation of $2a + b > d$ is satisfied where "a" is a number of lines that are not erased as an error of the copyright control data, "b" is a number of lines that are erased thereof, and "d" is a minimum distance of a error correction code that is used in the error correcting process.

--50. and 51. (Cancelled)

--52. (Currently Amended) The data writing apparatus as set forth in claim [[50]] 49,

wherein said data processing portion exclusively OR's the different data and other data, encodes the calculated result with error detection and/or correction code, and performs a process for removing the other data from the encoded data..

--53. (Currently Amended) A data storing medium, comprising:

a first area in which digital data is written; and

a second area in which control data including copyright control data necessary for reproducing the data from said first area ~~is written~~, the copyright control data being

written at two spaced-apart locations wherein the same copyright control data is written at the two locations, said second area having at least a write-prohibited portion formed by embossing the data storage medium at the two locations having the copyright control data.

--54. and 55. (Cancelled)

--56. (Currently Amended) The data storing medium as set forth in claim 53,

wherein said second area has a plurality of write-prohibited portions formed by the embossing at predetermined intervals.

--57. (Currently Amended) The data storing medium as set forth in claim 53,

wherein said second area has a plurality of write-prohibited portions formed by the embossing at predetermined intervals ~~in such a manner that the digital data that is read from said first area is synchronized.~~

--58. (Currently Amended) The data storing medium as set forth in claim 53,

wherein the data storing medium is a recordable optical

storing medium, and

wherein the write-prohibited portion is pre-formed by the embossing in said second area.

--59. (Cancelled)

--60. (Original) The data storing medium as set forth in claim 53,

wherein said second area is formed on the medium in such a manner that said second area is read earlier than said first area.

--61. (Original) The data storing medium as set forth in claim 53,

wherein the digital data that is written to said first area has been encrypted.